

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior listing of claims in the application.

17. (Currently amended) A process for imparting photochromism to an organic polymeric host material comprising transferring ~~a photochromic amount of~~ from a removable imbibition composition comprising photochromic compound(s) selected from the group consisting of naphthopyrans, benzopyrans, indenonaphthopyrans, quinopyrans, phenanthropyrans, metal dithizonates, fulgides, fulgimides and mixtures thereof, and from 0.1 to 99.9 weight percent, based on the total weight of the composition, and a ~~photochromic performance improving amount of~~ kinetic enhancing additive(s) comprising polyol(s), epoxy-containing compounds or a mixture of polyols and epoxy-containing compounds into said organic polymeric host material and removing the residual film formed from said composition.

18. (Original) The process of claim 17 wherein the transferring of photochromic compounds and kinetic enhancing additives is done from a carrier of solvent, polymeric resin or a mixture thereof, provided said polymeric resin is different from the kinetic enhancing additive.

19. (Canceled)

20. (Original) The process of claim 17 wherein the transferring of a photochromic amount of photochromic compound(s) and a photochromic performance improving amount of kinetic enhancing additive(s) is accomplished by a transferring order step selected from the group consisting of:

- (a) transferring kinetic enhancing additive(s) prior to transferring photochromic compound(s);
- (b) transferring photochromic compound(s) prior to transferring kinetic-enhancing additive(s); and
- (c) transferring kinetic enhancing additive(s) and photochromic compound(s) together.

21. (Original) The process of claim 17 wherein the transferring of a photochromic amount of photochromic compound(s) and a photochromic performance improving amount

of kinetic enhancing additive(s) is accomplished by a transferring order step selected from the group consisting of:

- (a) transferring a portion of the photochromic performance improving amount of kinetic enhancing additive prior to transferring the photochromic compound and the remainder of the photochromic performance improving amount of kinetic enhancing additive;
- (b) transferring a portion of the photochromic amount of photochromic compound prior to transferring the kinetic enhancing additive and the remainder of the photochromic amount of photochromic compound; and
- (c) transferring a portion of the photochromic performance improving amount of kinetic enhancing additive and a portion of the photochromic amount of photochromic compound prior to transferring the remainder of each.

22. (Original) The process of claim 17 wherein the transferring of photochromic compounds and kinetic enhancing additives is done with at least one of ultraviolet light absorber(s), ultraviolet light stabilizer(s), antioxidant(s), rheology control agent(s), or leveling agent(s).

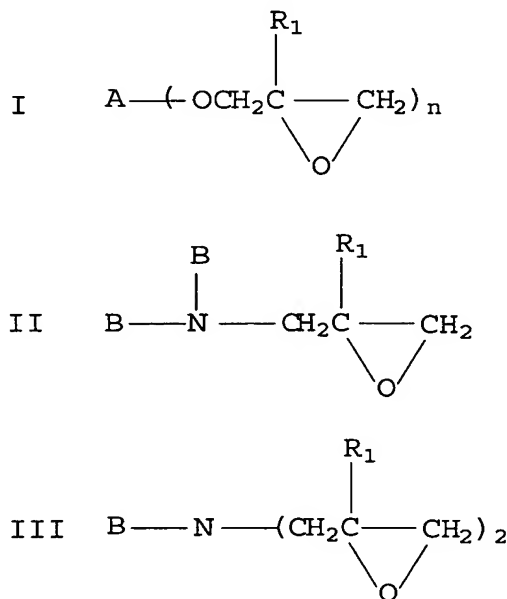
23. (Currently amended) The process of claim 17 wherein the polyol(s) comprises is ~~selected from~~ polyester polyols, polyether polyols, amide-containing polyols, polyhydric polyvinyl alcohols or a mixtures thereof.

24. (Currently amended) The process of claim 23 wherein the kinetic enhancing additive comprises is ~~selected from~~ polycaprolactone diol, poly(ethylene glycol), hexane diol, polytetrahydrofuran diol or a mixture thereof.

25. (Original) The process of claim 17 wherein the mixture of polyols and epoxy-containing compounds is in a weight proportion of from 1:99 to 99:1.

26. (Original) The process of claim 25 wherein the polyol is polycaprolactone diol and the epoxy-containing compound is trimethylolpropane triglycidyl ether.

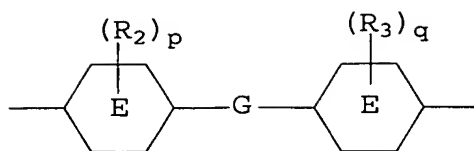
27. (Original) The process of claim 17 wherein the epoxy-containing compound(s) is represented by graphic formulae I, II, III or a mixture thereof:




wherein

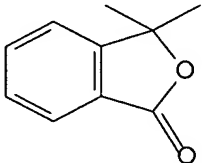
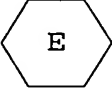
(i) R_1 is hydrogen or C_1 - C_3 alkyl;

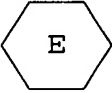
(ii) n is the integer one, two, three or four; when n is one, A is C_2 - C_{20} alkyl, substituted C_2 - C_{20} alkyl, C_3 - C_{20} cycloalkyl, substituted C_3 - C_{20} cycloalkyl; the unsubstituted or substituted aryl groups, phenyl and naphthyl; aryl(C_1 - C_3)alkyl, substituted aryl(C_1 - C_3)alkyl, acryloxy, methacryloxy; the group $-\text{C}(\text{O})\text{Y}$, wherein Y is C_2 - C_{20} alkyl, C_1 - C_6 alkoxy or aryl; or the group $-\text{R}-(\text{OR})_m-\text{OH}$ or $-(\text{OR})_m-\text{OH}$, wherein R is C_2 - C_4 alkylene and m is an integer from 1 to 20; said alkyl and cycloalkyl substituents being carboxy, hydroxy or C_1 - C_3 alkoxy, said aryl and aryl(C_1 - C_3)alkyl substituents being carboxy, hydroxy, C_1 - C_3 alkoxy or C_1 - C_3 alkyl; or when n is from two to four, A is C_2 - C_{20} alkylene, substituted C_2 - C_{20} alkylene, C_3 - C_{20} cycloalkylene, substituted C_3 - C_{20} cycloalkylene; the unsubstituted or substituted arylene groups, phenylene and naphthylene; aryl(C_1 - C_3)alkylene, substituted aryl(C_1 - C_3)alkylene; the group $-\text{C}(\text{O})\text{Z}(\text{O})\text{C}-$ wherein Z is C_2 - C_{20} alkylene or arylene; the group $-\text{R}-(\text{OR})_m-$ or $-(\text{OR})_m-$, wherein R and m are the same as defined hereinbefore; phthaloyl, isophthathoyl, terephthaloyl; hydroxyl-substituted phthaloyl, hydroxy-substituted isophthaloyl, hydroxy-substituted terephthaloyl; or a group represented by the following graphic formula:



wherein R_2 and R_3 are each C_1 - C_4 alkyl, chlorine or bromine; p and q are each an integer

from 0 to 4;  represents a divalent benzene group or a divalent cyclohexane group; G is $-O-$, $-S-$, $-S(O_2)-$, $-C(O)-$, $-CH_2-$, $-CH=CH-$, $-C(CH_3)_2-$, $-C(CH_3)(C_6H_5)-$,

$-(C_6H_4)-$ or  when  is the divalent benzene group; or G is $-O-$,

$-S-$, $-CH_2-$, or $-C(CH_3)_2-$, when  is the divalent cyclohexane group; said alkylene and cycloalkylene substituents being carboxy, hydroxy or C_1 - C_3 alkoxy; said arylene and aryl(C_1 - C_3)alkylene substituents being carboxy, hydroxy, C_1 - C_3 alkoxy or C_1 - C_3 alkyl; and

(iii) B is C_2 - C_{20} alkyl, substituted C_2 - C_{20} alkyl, C_3 - C_{20} cycloalkyl, substituted C_3 - C_{20} cycloalkyl; the unsubstituted or substituted aryl groups, phenyl and naphthyl; aryl(C_1 - C_3)alkyl or substituted aryl(C_1 - C_3)alkyl; said alkyl and cycloalkyl substituents being carboxy, hydroxy or C_1 - C_3 alkoxy, said aryl and aryl(C_1 - C_3)alkyl substituents being carboxy, hydroxy, C_1 - C_3 alkoxy or C_1 - C_3 alkyl.

28. (Currently amended) The process of claim 27 wherein the epoxy-containing compound is comprises polyethylene glycol diglycidyl ether, trimethylol propane triglycidyl ether, N,N-diglycidyl-4-glycidyoxyaniline, diglycidyl-1,2,3,6-tetrahydrophthalate, glycerol propoxylate triglycidyl ether, diglycidyl-1,2-cyclohexane dicarboxylate or a mixture thereof.

29. (Original) The process of claim 17 wherein the photochromic compound(s) have at least one activated absorption maxima within the range of 400 and 700 nanometers.

30. (Currently amended) The process of claim 18 wherein the carrier comprises water, benzene, toluene, methyl ethyl ketone, acetone, ethanol, tetrahydrofurfuryl alcohol, n-methyl pyrrolidone, 2-ethoxyethyl ether, 2-methoxyethyl ether, xylene,

cyclohexane, 3-methyl cyclohexanone, ethyl acetate, tetrahydrofuran, methanol, methyl propionate, ethylene glycol, hydroxy(C₁-C₃)alkyl cellulose, poly(vinyl pyrrolidone), polyvinyl chloride, polyvinyl acetate, polyvinyl butyral, polyvinyl propionate, cellulose acetate butyrate or a mixture thereof.

31. (Currently amended) The process of claim 17 wherein the organic polymeric host material comprises ~~is selected from~~ :

a) poly(urea-urethane), poly(C₁-C₁₂ alkyl methacrylates), poly(oxyalkylene) dimethacrylates, poly(alkoxylated phenol methacrylates), cellulose acetate, cellulose triacetate, cellulose acetate propionate, cellulose acetate butyrate, poly(vinyl acetate), poly(vinyl alcohol), poly(vinyl chloride), poly(vinylidene chloride), thermoplastic polycarbonates, polyesters, polyurethanes, polythiourethanes, poly(ethylene terephthalate), polystyrene, poly(alpha methylstyrene), copoly(styrene-methylmethacrylate), copoly(styrene-acrylonitrile), polyvinylbutyral; and

b) polymers homopolymers and copolymers of polyol(allyl carbonate) monomers, polyfunctional acrylate monomers, polyfunctional methacrylate monomers, diethylene glycol dimethacrylate monomers, diisopropenyl benzene monomers, ethoxylated bisphenol A dimethacrylate monomers, ethylene glycol bismethacrylate monomers, poly(ethylene glycol) bismethacrylate monomers, ethoxylated phenol methacrylate monomers, alkoxylated polyhydric alcohol acrylate monomers, diallylidene pentaerythritol monomers, urethane acrylate monomers, vinylbenzene monomers, styrene monomers and ~~mixtures of such monomers; or~~

c) mixtures thereof.

32. (Withdrawn) A product of the process of claim 17.

33. (Withdrawn) A product of the process of claim 18.

34. (Withdrawn) A product of the process of claim 19.

35. (Withdrawn) A product of the process of claim 20.

36. (Withdrawn) A product of the process of claim 21.

37. (Withdrawn) A product of the process of claim 22.